

REMARKS

This Amendment is submitted in response to the Office Action dated January 4, 2007. The Office Action rejected claim 19 under 35 U.S.C. §112, rejected claims 11-14 under 35 U.S.C. §102, and rejected claims 15-19 under 35 U.S.C. §103. Claims 11, 18 and 19 are amended herein. Claims 12 and 17 have been cancelled without prejudice or disclaimer. Claims 20-21 are newly added. Applicants believe the rejections are improper or have been overcome for at least the reasons below. An Information Disclosure Statement (IDS) is also submitted herewith. A Petition for a One-Month Extension of Time is submitted herewith. The Commissioner is hereby authorized to charge deposit account 02-1818 for the one-month extension of time fee, any other fees which are due and owing.

In the Office Action, claim 19 is rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In particular, the Office Action refers to insufficient antecedent basis for the element the “third alignment mechanism,” and lack of clarity with regard to the phrase “support members.” Applicants have amended claim 19 accordingly, and respectfully submit that the rejection has been overcome. Accordingly, Applicants respectfully request that the 35 U.S.C. 112, second paragraph rejection be withdrawn.

The Office Action rejects claims 11-14 under 35 U.S.C. §102(b) as being anticipated by JP 10-214682 to Tanamura et al. (“Tamura”). Of these rejected claims, claim 11 is the sole independent claim. Amended claim 11 recites, at least in part, an apparatus for manufacturing an organic electroluminescence display. The organic electroluminescence display includes a substrate, a first electrode layer formed on the substrate, an organic layer including a plurality of organic material layers stacked on the first electrode layer in a predetermined pattern and a second electrode layer formed on the organic layer. The apparatus includes: a first alignment mechanism for aligning a mask, having openings corresponding to the predetermined pattern, to the substrate and for detachably attaching the mask and the substrate; a first formation unit including a plurality of vacuum processing chambers for sequentially forming the organic material layers on the substrate at a first color position, the substrate being attached to the mask; a second alignment mechanism for changing the alignment between the substrate and the mask, and for detachably attaching the substrate and the mask again; and a second formation unit

including a plurality of vacuum processing chambers for sequentially forming the organic material layers on the substrate at a second color position, the substrate being attached to the mask, wherein each of the vacuum processing chamber correspond to each of the organic material layers. The second alignment mechanism is provided to connect the first formation unit and the second formation unit in series, and is also configured to perform the alignment changes in a vacuum atmosphere.

According to the English translation of Tanamura, the Tanamura reference generally relates to equipment and methods for manufacturing thin film light emitting devices. (See, Tanamura, [0001]). It appears from Fig. 1 of Tanamura that the apparatus includes a plurality of vacuum processing chambers 22-26, and a plurality of robotic mechanisms 22b-26b located in housings 22a-26a, where each housing is adjacent to each processing chamber 22-26. The substrate is transferred serially from chamber to chamber by the robotic mechanisms 22b-26b through connecting chambers 22c-26c.

First, Tanamura fails to disclose a first formation unit and a second formation unit, each unit including a plurality of vacuum processing chambers. Indeed, each ‘formation unit’ in Tamaqua (e.g., 22, 22a, 22b and 22c) only corresponds to or includes one processing chamber (e.g., 22).

Second, Tanamura does not disclose an alignment chamber as part of this apparatus, much less a second alignment mechanism for changing the alignment between the substrate and the mask, and for detachably attaching the substrate and the mask again, and a second formation unit including a plurality of vacuum processing chambers for sequentially forming the organic material layers on the substrate at a second color position, as recited in amended independent Claim 11. Also, Tanamura fails to disclose a second alignment mechanism that is provided to connect the first formation unit and the second formation unit in series, and is also configured to perform the alignment changes in a vacuum atmosphere, as recited in amended claim 11. Instead, Tanamura only discloses empty transfer chambers 22c-26c. The Office Action cites to paragraph [0071] of Tanamura for alleged support of an alignment chamber. However, this paragraph merely appears to mention that the “substrate 1 is installed on the metal mask arranged beforehand.” (See, Tanamura, [0071]). This seems to imply that whatever alignment is performed, is performed before the device enters the first chamber 21 at an aligner located

elsewhere. Therefore, contrary to the presently amended claims, Tanamura does not seem to contemplate performing an alignment and/or realignment between a substrate and a mask in the context of the disclosed manufacturing apparatus.

For at least the reasons above, Applicants respectfully request withdrawal of the 35 U.S.C. §102(b) rejection with respect to claims 11, 13 and 14.

The Office Action rejected claims 15 and 16 under 35 U.S.C. §103(a) as being unpatentable over Tanamura in view of U.S. Pub. No. 2001/0006827 to Yamazaki et al. ("Yamazaki"). Yamazaki is merely relied on for the purported teaching of an attachment fixture including a magnet plate for attaching the substrate and the mask and the mask is formed of a magnetic material. (See, Office Action, pg. 5). Therefore, Yamazaki fails to cure the deficiencies of Tanamura, as discussed above. For at least the reasons discussed above, Yamazaki and Tanamura fail to render obvious amended claims 15 and 16, even assuming that they are properly combinable.

Accordingly, Applicants respectfully request the withdrawal of the 35 U.S.C. §103(a) rejection of claims 15 and 16 in view of Tanamura and Yamazaki.

The Office Action rejected claims 17-19 under 35 U.S.C. §103(a) as being unpatentable over Tanamura in view of Yamazaki, and in view of U.S. Patent No. 5,310,410 to Begin et al. ("Begin"). Begin is merely relied on for the purported teaching of an using a mask in a plurality of chambers to deposit different layers, where an electromagnet is switched off and the substrate holder and mask holder are shifted between layers. (See, Office Action, pg. 5). Therefore, Begin fails to cure the deficiencies of Tanamura and Yamazaki, as discussed above. For at least the reasons discussed above, Yamazaki, Tanamura and Begin fail to render obvious amended claims 18 and 19, even assuming that the references are properly combinable. In this regard, Applicants respectfully submit that Begin is not properly combinable with the remaining references because Begin is directed to an apparatus for processing wafers which are fabricated to provide semi-conductor chips. Thus, Begin does not relate to processing an electroluminescent (EL) device and it would not be obvious to consider the processing chambers disclosed therein to be used to perform one or more alignment procedures between a mask and a substrate that are specifically related to processing an EL device, as recited in the amended claims.

The concept of flow-through processing in a controlled environment for multiple organic color layers of an EL device, where the different organic colors layers require alignments and realignments between a mask and a substrate is not fairly disclosed or suggested by the references. In the presently claimed invention, the different colored organic layers of the EL device are formed in a continuous fashion without having to expose the device to the atmosphere or having to endure increased wait times for alignments and realignments of the mask. For at least the reasons discussed above, Tanamura, Yamazaki, and Begin fail to render obvious amended claim 1, even assuming that they are properly combinable.

Accordingly, Applicants respectfully request the withdrawal of the 35 U.S.C. §103(a) rejection of claims 18 and 19 in view of Tanamura, Yamazaki, and Begin.

New claims 20-21, which depend from claim 11 are believed to be allowable for the reasons given above and for the additional patentable elements recited therein.

As previously provided, Applicants are submitting an IDS concurrently herewith. The IDS cites to the Office Action dated December 14, 2006 issued in the parent case No. 10/153,453. Applicants believe that the pending claims are patentable over the art of record including the art cited in the parent application, such as the art cited in the Office Action referenced above.

For at least the foregoing reasons, Applicants respectfully submit that the present application is in condition for allowance and earnestly solicit reconsideration of same.

Respectfully submitted,

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